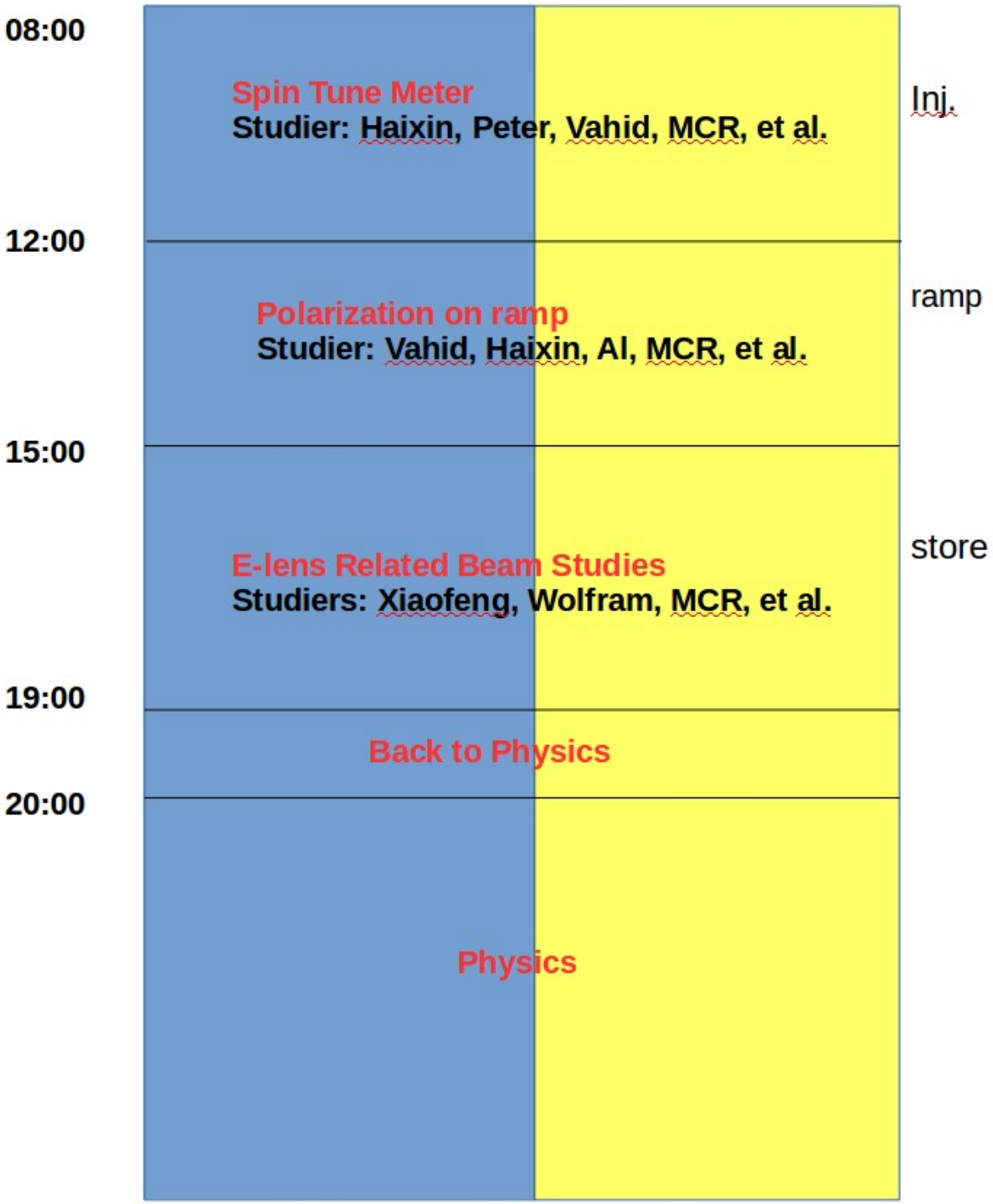
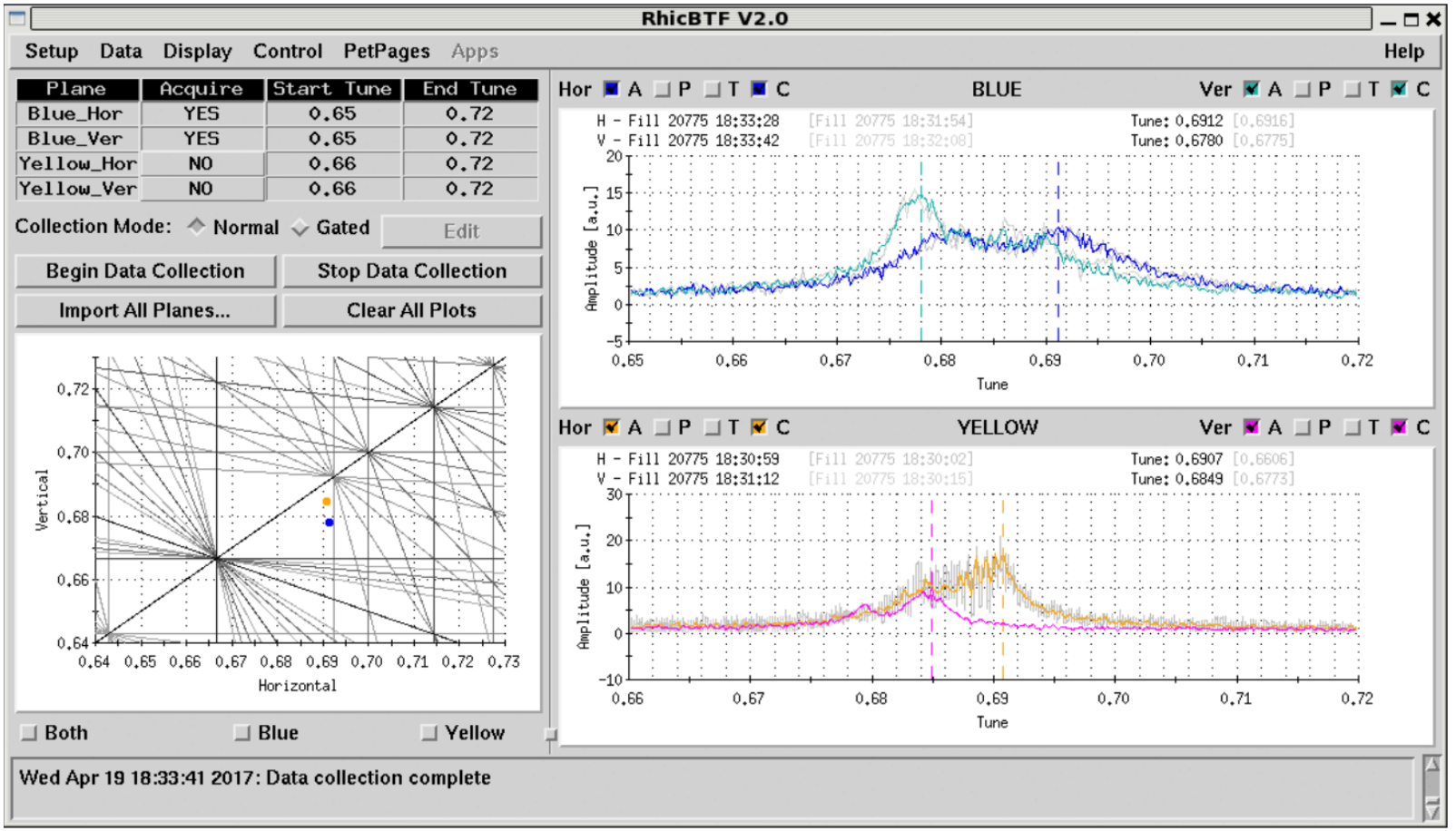
APEX Schedule for April 19, 2017



æ Apr 19 18:52 cp Wolfram (Xiaofeng, Al) [3 edits]

End of e-lens study. Summary:

1. Aligned Blue lens in position and angle. Angle alignment with electron beam.
2. Current scan from 0 to 800 mA with sige = 0.28 mm (BTF measuremens)
3. BTF with elens and STAR collisions.
4. sige scan from 0.28 to 0.34 mm with 800 mA (BTF measurements)
5. Current scan from 800 to 0 mA with sige = 0.34 mm (BTF measurements)
6. Yellow cathode heater is damaged, Yellow lens is not usable any more



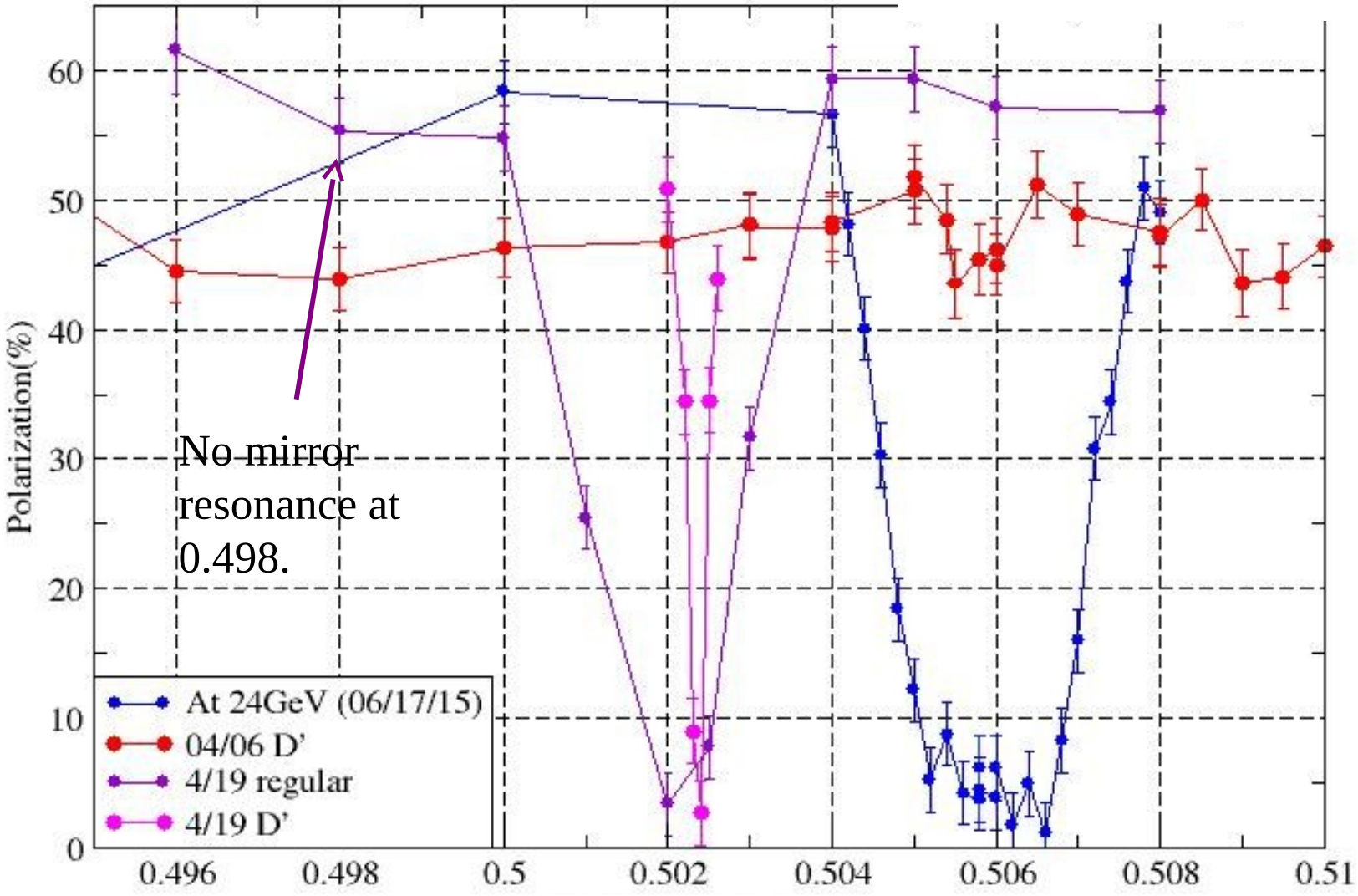
Spin TuneMeter @ Injection

H. Huang, P. Oddo, C. Liu, A. Marusic, F. Meot, V. Ranjbar

April 21, 2017
APEX Meeting

Scan Driving Tune Results

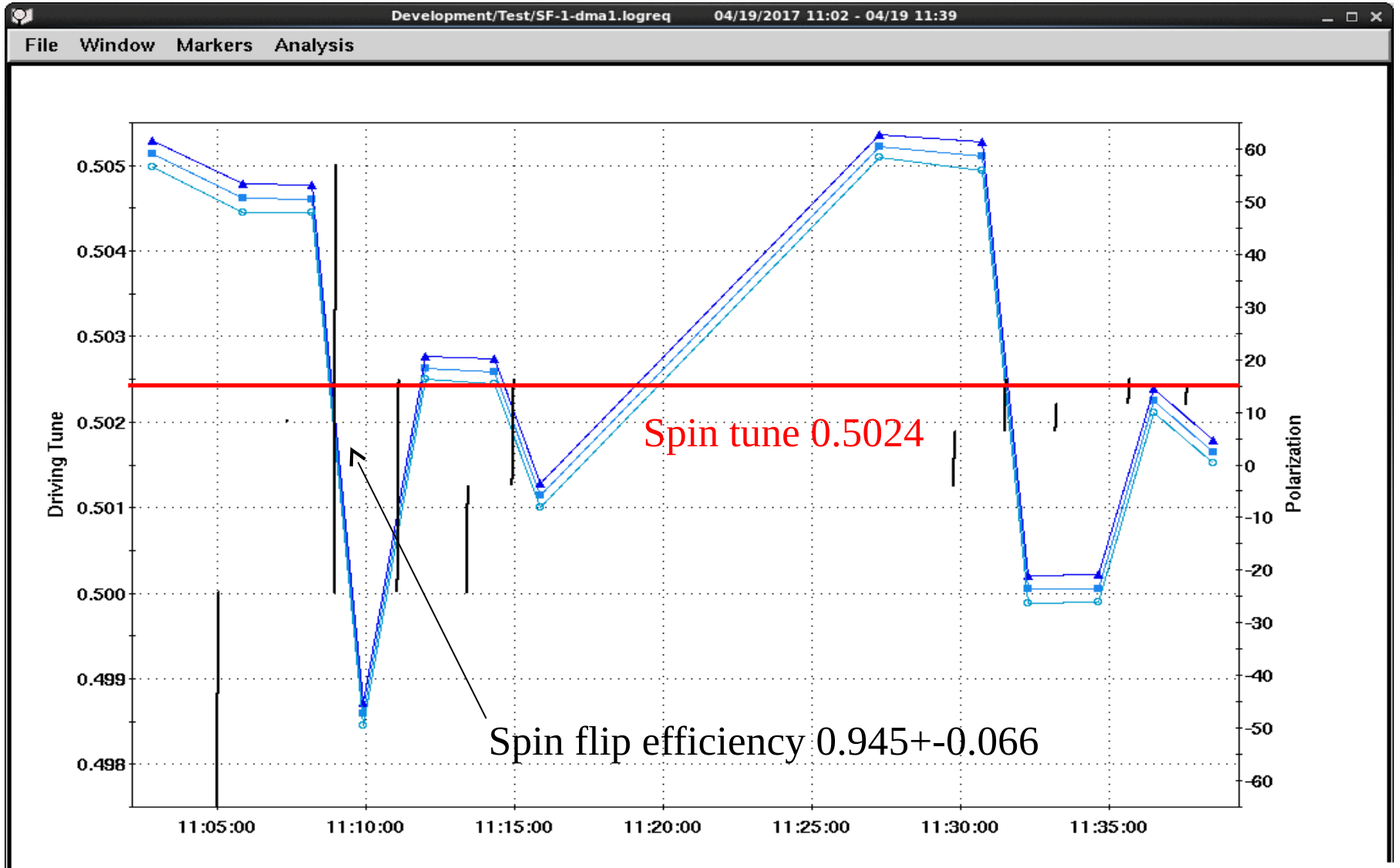
$$\delta Q_s = \frac{G\gamma}{\pi}\Delta D'\frac{\Delta p}{p},$$



Very narrow spin tune spread with D' lattice (~5 times smaller). Some small difference of spin tune between regular and D' lattices. The spin tune spread is similar to two years ago, 0.004.

(Haixin Huang)

Sweep Driving Tune Results (D' Lattice)



the vertical black bars show the driving tune sweep range. Most of driving tune sweep ranges are too close to the spin tune 0.5024. So no good spin flip efficiency is expected from them.

(Haixin Huang)

Plan for Next Time

- Replace 3-bump with 4-bump at spin flipper.
- Take more spin flipper measurements at injection with proper driving tune sweep.
- Test spin flipper at store with D’ lattice.
- Measure the spin tune with several ways: fixed driving tune method, sweep driving tune method, driven coherent precession method. This may take 5-7 ramps.